Current Industrial Composites

Sheeting · Tubes · Rods · Fabricated Parts · Epoxy · Phenolic

MATERIAL DATA SHEET

Material: Grade XXX Paper Phenolic Laminate Sheet

Description: XXX sheet has excellent machining characteristics, low moisture absorption and excellent dimensional stability over large changes in temperature and humidity. Chemical resistance is good when exposed to organic solvents and oils. Grade XXX is frequently specified for use in switchgear, oil filled transformers and power distribution products, tooling stock and test panel applications

Standards: NEMA LI-1 Grade XXX

MIL-I-24768 / 10 - PBE

Physical Properties	Test Condition		ASTM	Typical Values
For Thickness				.125"
Specific Gravity			D792	1.38
Rockwell Hardness (M Scale)			D785	101
Water Absorption (maximum)			D229	.95 %
Flexural Strength	Condition A:	Lengthwise Crosswise	D229	20,000 psi 15,000 psi
Tensile Strength	Condition A:	Lengthwise Crosswise		14,000 psi 12,000 psi
Compressive Strength	Condition A:	Flatwise	D695	30,000 psi
Izod Impact Strength (.500" thick)	E48/40:	Lengthwise Crosswise	D229	0.55 ft-lb/in.(notch) 0.45 ft-lb/in.(notch)
Bond Strength (.500" thick)	Condition A D 48/50		D229	1000 lbs 700 lbs

Thermal & Electrical Properties	Test Condition	ASTM	Typical Values
Temperature Index Electrical / Mechanical			140° C
Volume resistivity			$6x10^7$ megohms-cm
Surface resistivity			$6x10^6$ megohms
Dielectric Breakdown Voltage (step x step)	Condition A / D 48/50	D229	50 kV
Maximum Permittivity @ 1 MHz	Condition A / D 24/23	D229	5.3
Maximum Dissipation @ 1 MHz	Condition A / D 24/23 / D48 / 50	D229	.038
Dielectric Strength (short time)	Condition A	D229	320 Vpm
Arc Resistance	Condition A	D 495	199 seconds